Climate migration and health
Conference Report

Prof. Stephen A. Matlin, Dr Anneliese Depoux, Dr Stefanie Schütte, Prof. Elke Schaeffner, Prof. Tobias Kurth, Susanne Stöckemann, Sophie Puig-Malet, Corinne Kowalski, Mathieu Hémono, Prof. Antoine Flahault
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Imprint

Publisher
Université Sorbonne Paris Cité / Centre Virchow-Villermé for Public Health
Hôpital Hôtel-Dieu (AP-HP)
1 place Parvis Notre-Dame, F-75004 Paris

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Layout
Julien Ricca, Centre Virchow-Villermé / Nom des photographes : François-Xavier Thiébaud (page 7, 9, 33, 35, 39); Vermischtes (page 11); NASA Expedition 19 crew (page 13); photo research (page 17) luckey-sun, Flickr; UNHCR (page 23); UNHCR (page 27)

Print
Université Paris Descartes, Paris
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Climate change is causing an increasing frequency and severity of adverse weather events, some of which, such as floods and heatwaves, have a direct impact on health and cause sudden displacements of people. Over time, the changes in climate that cause phenomena such as droughts and rises in sea level also result in people being forced to move. Climate change also acts as an impact multiplier and accelerator to other drivers of human mobility.

While the precise scale, location and timing of population movements that are caused, at least in part, by climate change are uncertain, there is growing evidence that they will be substantial and will increase in the years to come. Much of the displacement is likely to be internal, but there will also be external displacement.

Climate change is already having a major impact on health globally and the World Health Organization (WHO) predicts that between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress. In addition to these effects, the health of people displaced internally or externally can be seriously impaired by their conditions, treatment, experiences of physical and mental trauma, stress and lack of access to services. The 2009 Lancet and University College London Commission on managing the health effects of climate change declared that “climate change is the biggest global health threat of the 21st century”.

A variety of international agencies including WHO, the International Organization for Migration (IOM) and other UN bodies, as well as national agencies including those of France and Germany, are providing important assistance to countries experiencing the impacts of climate change. However, to date there has been little action at the level of the European Union to address climate, migration and health.
Key points emerging from the conference include:

• There is a substantial lack of data relating to the field. The difficulty of identifying those who have been displaced by climate factors, as a primary or contributory cause, has led to widely differing estimates of the likely numbers of such migrants as climate change progresses during the century. Little original research has been undertaken. The nature and extent of health problems among people moving as a result of climate change are also not well understood and too little attention has been given to mental health issues.

• There is extensive scope for interventions that can help reduce impact and increase resilience to climate change through both pro-active and responsive measures in the countries affected, many of which are in tropical regions and relatively poor. Local initiatives, supported by international partners, can help strengthen resilience, mitigate and adapt to environmental and agricultural impacts, increase economic opportunities and upgrade public health systems, reducing the need for internal displacements or outward migrations.

• The rights of those displaced, whether internally or externally, including the right to health, are often poorly protected in practice. More vigorous application of existing human instruments is needed, as well as clarification and possibly re-definition of the rights of those displaced, whether categorised as ‘migrants’ or ‘refugees’.

• Gender issues play a significant role in climate, migration and health and it is important to recognise and respond both to the greater vulnerability of women and girls and to their potential for being part of the solution in strengthening adaptation strategies and resilience.

• There is a need for better planning, preparation and training in countries to which migrants move, including better training in health and related services on how to recognise and respond to mental health problems that may be slow to manifest. Education and training also needs to be provided for the migrants themselves, to help them adapt culturally and to enhance their skills and potential for employment.

• Interdisciplinary approaches are especially important in responding to the challenges of climate, migration and health and more effort is needed to overcome institutional barriers to these approaches.

• There are difficulties in working in the field of migration at a time when it has become politically charged.

• Overall, there is a need for much more data, more education and research and greater attention to policies and response systems, including in origin, transit and destination countries.
Dialogue on climate, migration and health

The Centre Virchow-Villermé (CVV) provides an international platform to link research and education to global policy and to foster close cooperation and dialogue between German and French researchers and policy-makers. For more information, see ‘About the Centre Virchow-Villermé’ at the end of this report.

On 10 June 2016, around 80 participants came together at the French Embassy in Berlin to attend a conference on “Climate, Migration and Health”, co-organized by the CVV and the science department of the Embassy. The meeting took place 6 months after the COP21 Climate Change Conference in Paris in December 2015, where 196 parties adopted an agreement\(^1\) to help limit global warming to less than 2°C above pre-industrial levels and with an aspiration to achieve a limit of not more than 1.5°C warming. The agreement comes into force when it has been ratified by 55 countries;\(^2\) France completed its own ratification in June 2016.\(^3\,^4\)

The aim of the presentations and discussions in the meeting was to explore several key questions:

- Does climate change cause or increase migration and if so, to what extent and through what mechanisms?
- How do climate change and migration, separately and together, impact on health and health systems in the countries of origin and in Europe through direct and indirect processes?
- What measures can be taken to reduce migration as a consequence of climate change, to mitigate the adverse health impacts of climate change and migration and to meet the challenges that they present to health systems?

The opening speeches were given by His Excellency Philippe Etienne, the French Ambassador to Germany and Prof Antoine Flahault, co-director of the Centre Virchow Villermé. The detailed programme of the conference is annexed to this report.
Background on climate, migration and health

Climate change and migration

Anthropogenic actions during the last 150 years have contributed to a rise in the average surface temperature of the Earth of around 1°C. This change has resulted in shifts in long-term climatic conditions that vary in different parts of the world, with some regions growing warmer and dryer and others becoming wetter; and an increase in the incidence and severity of adverse weather events including heatwaves, floods, storms, cyclones and droughts that is also unevenly distributed globally, with tropical regions being most affected. The average sea level is already rising by 3 millimetres per year, faster than any other time in the last two millennia; many of the world’s cities lie on the coast or on river banks, with poor neighbourhoods most likely to be in low-lying areas vulnerable to flooding. Some small island states are especially vulnerable to inundation.

In recent years, more people have been displaced due to weather extremes (mainly floods and storms) than due to natural disasters caused by geophysical events such as earthquakes and volcanic eruptions. The frequency of extreme weather events such as record-high rainfalls is increasing. Climate models predict that increasing global temperatures will further accelerate this, resulting in more river floods, increased storm surges in coastal areas, more frequent strong tropical cyclones, heat waves and draughts. As well as through these adverse events themselves, climate change is likely to affect societies through impacts on diverse other factors including food prices, economic growth and inequality, and perhaps even the potential for conflict. In summary: climate change amplifies many of the risk factors that contribute – directly or indirectly – to human migration today. The more so, the warmer the world becomes. Tropical and subtropical regions are generally hit harder than more temperate regions like Europe.

Nomenclature and wording

As reflected in the discussions during the meeting, the term ‘migrant’ remains a contested one, with differing
views on how it applies to people displaced by climatic events. The International Organization for Migration (IOM) defines\(^9\) a migrant as any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is.

While the definition of migration adopted by the IOM does not recognise the distinction between ‘internal’ and ‘external’ migrants or the causes of their movement, others find it useful to distinguish different categories of displaced people, including those ‘internally’ or ‘externally’ displaced; those displaced temporarily or for long periods; and those displaced due to sudden adverse weather events that cause an immediate crisis and those who respond to long-term pressures created by a gradually changing climate that contribute to a local environment becoming less hospitable. Although such distinctions may not be recognized in international law, it is argued that a disaggregation of types can contribute to better understanding of drivers and consequences and to focused planning to deal with specific cases.

The utility of the concept of ‘climate change migrants’, or ‘environmental refugees’ is also questioned. While adverse weather events causing floods or droughts have an immediate impact and cause immediate local displacements of people, the slower, longer-term impacts of climate change (such as gradual reductions in water supply, less productive land or retreat of forests), can be complex and become inextricably linked with other parallel pressures (such as economic, social, political) that may encourage people to move, first within (e.g., from rural to urban or peri-urban sites) and eventually between countries.

**Health and health systems**

WHO defines ‘health’ as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’.\(^{10}\) The breadth of this definition is important in relation to migration resulting (at least in part) from climate change, as each migrant’s experience is different and may include some, all or none of a wide range of specific diseases, physical and mental traumas and degrees of social exclusion or isolation. Likewise, it has consequences for health systems – both for those in countries where people are internally displaced due to the effects of climate or weather events and those in countries that need to cope with the physical and mental health problems of migrants at the point of entry and throughout their temporary or long-term stay.

**Drawing on analogies**

The meeting heard that very little research has so far been undertaken on the relationships between climate, migration and health and there is often a paucity of data from which reliable conclusions can be drawn. This is especially true of the interaction between climate change and migration. Does climate change (in the sense of long-term changes to factors like temperature and rainfall patterns) causes migration? If displacements due to adverse weather events are usually local and temporary, what can they tell us about longer-term outward migrations? How much can we draw upon experiences from populations displaced by natural disasters such as earthquakes and tsunamis, or by war or political oppression?

Inevitably, faced with the paucity of hard data, analogies are often drawn, while recognising that (a) in reality it may be impossible to disentangle the multiple short- and long-term factors that cause a particular migrant or refugee to move and it may be inappropriate to try to distinguish between different sub-categories of migrants such as ‘economic’, ‘political’ or ‘climate’; (b) migrating groups may be highly heterogeneous and the particular history, circumstances and stresses experienced by each migrant will influence their resilience and their physical and mental health, so that generalizations should be made with great caution.
What do we know?

**Climate change and migration**

Does climate change (extreme weather events and slower extreme events such as droughts) cause long or short term, temporary or permanent, internal or external displacements?

Since 2008, an average of 26.4 million people have been displaced from their homes each year by disasters brought on by natural hazards – equivalent to one person displaced every second. The latest historical models suggest that, even after adjusting for population growth, the likelihood of being displaced by a disaster today is 60 per cent higher than it was four decades ago.\(^{11}\) Of the displaced population, it is estimated that an average of 22.5 million people each year have been displaced by climate- or weather-related disasters and this could rise substantially, with predictions\(^ {12,13} \) ranging from 200 million to more than 1 billion per year by 2050. There will be important impacts on health, both directly and indirectly (e.g. through impacts on food production, lack of water, disease patterns) that can also impact on migration. Furthermore, displaced populations face lack of food, water and health care. This presents a collective challenge to academia, policy makers and diplomats concerning what to do to be prepared – with humanity, realism and sustainability. There is need for research and interdisciplinary cooperation to address the challenges, with the cooperation of all stakeholders.

People have left their homes for many reasons, including escaping war, seeking more promising lives and inability to live on or continue producing any more on their own land. Climate change plays a very significant role in these drivers of migration. In the period ahead, climate will generate new migration dynamics and will drive people to leave their lands (Box 1).
Box 1  Climate change contributes to migration

We now know that climate change is a driver of migration, and is expected to increase the displacement of populations. This is an issue that doesn’t get enough discussion. It is a problem that needs new solutions.

Mary Robinson, UN Special Envoy for Climate Change

While the precise scale, location and timing of population movements are uncertain, there is growing evidence that they will be substantial and will increase in the years to come. Climate change acts as an impact multiplier and accelerator to other drivers of human mobility. Most displacement is likely to be internal, but there will also be external displacement.

Chairperson’s summary, The Nansen Conference on Climate Change and Displacement, 6-7 June 2011

Climate change and health

WHO predicts that between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress. As noted by the 2015 Lancet Commission on Health and Climate Change, there are complex interactions between causes and effects in looking at the impacts of climate change. Interaction can be direct and indirect and ecological processes, such as impacts on biodiversity and changes in diseases vectors, and social dynamics, can amplify these risks. Climate factors such as temperature, humidity, precipitation, weather extremes and season lengths can affect both the causative agents of infectious diseases (bacteria, viruses, parasites) and the vectors that carry them, resulting in altered exposure of human beings to pathogens and changing patterns of burdens of diseases within and across regions.

It is evident that a number of emerging infections are being driven or facilitated by climate change, for example influencing movements of dengue, Chikungunya and zika viruses, food borne infections and malaria in tropical and sub-tropical regions; tuberculosis, Lyme diseases, hantavirus, West Nile Fever, dengue, Chikungunya and zika viruses, leishmaniasis and food borne infections in Europe and North America; and food borne infections and zoonoses in Arctic and sub-Arctic regions. Climate change also impacts on non-communicable diseases and mental health. For example, the heatwave in Europe in 2003 (the hottest summer on record in Europe since at least the 16th century) caused more than 70,000 extra deaths. Studies have shown that the largest effects of extremely hot days are seen in the elderly, especially women, with the increase in cardiovascular mortality being higher than the increase in mortality from respiratory diseases. Several climate change-related factors adversely affect mental health or exacerbate existing problems, with vulnerable populations (including indigenous populations, aborigines, nomads, elderly people, children, chronically ill people, people with low income and homeless people) being especially sensitive. Recognising and mapping the vulnerable populations through the most important factors of vulnerability can be helpful in developing targeted adaptation measures.

Climate change relates to population movements through affecting local factors such as food production, availability of fresh water and useful land, as well as through impacts on population health. The added population pressures (including via social, demographic, political and economic stressors) and adaptive responses can lead to population movement, sometimes in association with conflict. The outcomes may be forced displacement or planned resettlement within a country, or migration elsewhere.
While a great deal needs to be done at national and global levels, individuals should not feel helpless – there are ways that everyone can contribute to reducing both global warming and its potential impacts. One important factor at the personal level is that ‘active commuting transportation’ (e.g. going to work by bicycle or on foot) not only reduces carbon dioxide emissions but also obesity and diabetes.

**Climate migrations: gender, vulnerability and development policies**

Beyond the issue of migration, climate change not only impacts on their health but increases the vulnerability of women, who are often already at a great disadvantage compared with men. Arguments were presented in the meeting that, especially in some low- and middle-income countries, women are more vulnerable than men; that women's contributions in decreasing climate deterioration are insufficiently recognized; and that promoting gender equality and women's empowerment will significantly enhance policies on climate change.

**Climate change more severely affects women who have the most limited capacities to adapt to it**

In some low- and middle-income countries, scarcity of water and wood resources means that women have to travel (usually on foot) further to gather them and this limits their access to paid, complex activities and to education and health; in camps they are exposed to increased violence and risk of rape but decreased access to reproductive health services; and there is a sociological dimension affecting gender-specific social roles and discriminations, with survival skills being less taught to girls than to boys, so they can't swim, are less educated on climate change issues and less capacitated to respond.

**The contribution of women in reducing climate deterioration is insufficiently recognized**

Despite these constraints women play an essential role in prevention, adaptation and mitigation of climate change impacts – but the contribution of women is little known, underestimated and undervalued or not acknowledged in the roll-out of large-scale national public policies. Women are under-represented in the governance processes and are rarely involved in decision-making; and do not have equal access to funding. Large-scale agricultural schemes (which may attract substantial national and international resources) often neglect women and their knowledge.

**Women as actors in addressing climate change**

Women play diverse roles in addressing climate change – e.g. in reforestation and recycling of waste and in helping to mobilise increased numbers of people engaged in food security and through making large contributions to national plans of action for adaptation. United Nations Population Fund (UNFPA) case studies in Pakistan and India on the role of women demonstrate they have a great capacity to forecast needs and skill in managing resources and this can be linked with simple technical innovations such as paddle-pumps and better stoves that decrease wood consumption and CO$_2$ production.

The COP21 agreement supports women's empowerment (calling for gender equality and a gender-responsive, participatory and fully transparent approach) as a strategy to improve population resilience, involving enhancing the capacity to make personal choices and economic empowerment leading to stronger action capacities, both collectively and as individual citizens. Following this approach should have three major positive consequences: permitting individual growth, promoting social justice and aiding sustainable development.

Gender is not the only aspect of inequity that requires attention – others include poverty and discrimination or vulnerability based on age, ethnicity and class. As in many other areas, solving the gender and other inequity issues in relation to climate, migration and health will go a long way towards solving the overall problems.
What do we need to know?

**Where are the research gaps?**

With the objective of understanding where there were major research gaps, a scoping review was undertaken, interrogating available health databases held at the Centre Virchow-Villermé. The review examined PubMed and Web of Science articles in the period 1990-2015 using a set of key words, the initially discovered papers being screened for relevance and any duplicates removed. This yielded 3750 articles relevant to climate change and health that were examined in detail.

The publication rate relating to climate change and health was low throughout the period up to c. 2005, when it began to surge to a first pronounced peak that coincided with the COP15 Climate Change Conference in Copenhagen and included a landmark publication by the Lancet/University College London Commission on climate change and health\(^{23}\) (Box 3). The Commission declared that “climate change is the biggest global health threat of the 21st century”. The publication rate relating to climate change, health and migration remained very low for the whole of the period under review (Box 3), with only 136 of the 3750 articles examined mentioning migration-relevant keywords and only 25 of these were identified as articles relevant to the topic of climate change, health and migration.
Box 2 Links between climate change, health and migration

Climate change poses major threats to human health
- Approximately 150,000 deaths annually by 2009

Health risks associated particularly with forced displacement
- Around the world, over 5,400 migrants lost their lives in 2015

Climate change has an impact on population movement
- Estimated up to 250 million people per year may move by the middle of the century

Source: S. Schütte, Centre Virchow-Villermé, Berlin

Box 2 summarises in broad terms the relationships that are considered to operate: climate change has direct and indirect effects on health, and also on population movement. Migration is itself a risk factor for adverse health events.
Some of the main characteristics of the 3750 selected articles were:

- Only 8% were research articles, while the rest were overviews, reviews, opinion pieces and editorials; 76% had no particular geographic focus; 76% were from academic institutions; and 88% had authors from high-income countries.

- Of articles that mentioned health impact and a migration-relevant term, health areas referred to were infectious diseases (24%), malnutrition (8%), respiratory diseases (8%), no specific focus (40%) and others (20%).

While this preliminary study was based on only two data sets, did not include any grey literature and had not yet been normalised according to the overall growth in publications in the era of online access, it nevertheless gives a useful opening into an area that evidently requires much more detailed study. At the same time, it indicates that existing research in the field is weak and that potential health effects discussed in papers are often extrapolated from similar migration situations, but there are few existing real data. Much of the research so far has focused on trying to estimate (1) the numbers of people that will be displaced by climate change (e.g. one prediction is that future weather anomalies are expected to lead to an additional annual displacement of 11.8 million people by the end of the 21st century); and (2) health impacts due to climate change (e.g. higher temperatures are expected to increase the prevalence of food-borne diseases).
The difficulty was highlighted of working in the field of migration at a time when it has become politically charged. Nevertheless, a large research gap has been identified and it is important to try to fill this with serious work on the real causal linkages of migration. The precise role of migration in the health/climate change/migration triangle needs in-depth discussion and research.

It was pointed out that the framework of climate, migration and health is a complex model. It combines three very disparate entities. Climate change and health status are both described by aggregate data. Migration is extremely complex and is an indirect behavioural consequence partly determined by health or climate change. To do research, it is necessary to think in terms of feedback effects and it is also necessary to look at each aspect individually and not only consider them together, using different types of research that are appropriate to the different dimensions and scales involved in each area.

The overall conclusion, that little research has been done on the health impacts and the potential multiplying effect of migration and climate change on health, is an important message for academics and research funding bodies as well as for policy makers and service providers.

Factors that may explain the very small number of papers on the health/climate change/migration issue include:

- Little data is available on which researchers can draw. CVV will have a workshop on this at the 2016 World Health Health Summit.

**Learning from history?**

In the absence of strong evidence about the nature and extent of the relationship between climate change and migration, the importance of learning from history was emphasised. The idea of the ‘climate refugee’ had become a key notion in the current discourse on climate change and the Intergovernmental Panel on Climate Change (IPCC) had accepted estimates of up to 200 million such people in the coming decades. However, the question of evidence was vexed by two central questions of definition:

1. How to define a climate change refugee, when migrations can be due to multiple motives co-occurring, including draught, civil war, economics, etc?
2. What constitutes a migration? When is temporary relocation a migration?

In the past, abrupt disasters such as earthquakes, floods and tsunamis have caused the displacement of large numbers of survivors. But in these displacements, the dominant pattern has been temporary relocations within the immediate region – to the surrounding countryside and cities where those displaced can rely on social networks. The costs (financial and social) of international migration are often prohibitive. Similarly, in climate-related environmental stresses (e.g. the dust bowls in the USA in the 1930s), people either tried to remain where they were, or moved temporarily to big cities and later many returned. By contrast, there is no direct evidence of large international movements of people caused by climate events or natural disasters. These historical facts need to be integrated into planning at all levels from local to global, along with the observation that the poor are always the most vulnerable.
Historically, the observed drivers of large-scale migrations have not been environmental stresses, but rather political violence, warfare and the demand for labour. In all such migrations, one clear factor has been the need for attention to health – including the provision of primary health care and treatment of health problems in receiving centres and camps.

Thus, it was argued that available historical evidence did not support a discourse (as found in some climate change literature) which suggested that ‘hoards of people’ were coming to Europe because of climate change.

The discussion on this issue highlighted that, while history is important as a source of evidence on what has happened in the past, circumstances may change in the future. Furthermore, it was observed that it is much easier to examine migrations in the case when people are fleeing sudden, large-scale disasters, rather than when longer-term, gradual environmental shifts lead to displacements that may be attributed to economic or other factors and the ‘climate change migrant’ hard to identify. Moreover, two important new factors are the rapidity of modern communications (for both physical objects and ideas); and the roles of the supranational community in response to events, both of which may influence the decisions of potential migrants.

It was noted that 20th century networks had provided the opportunity both for people to move to and from problem areas and for pathogens to quickly circulate; and that the division between external and internal migrations was in some ways artificial.
Implications for Public Health in countries of origin and destination

Several key issues emerged from a panel discussion on the potential implications of climate-related migration for public health in countries of origin and destination.

In countries affected by climate change, it is important to use mitigation and adaptation measures to counter health impacts – requiring good epidemiology, knowledge of changing demographics and disease vectors, improved public information systems and making health systems fit for these problems. These are all particular challenges in many lower income countries. A well-functioning public health system could help prevent or reduce population displacements and give people greater resilience. As examples of approaches, Germany’s strategies have included strengthening the health systems in Jordan and other countries adjacent to Syria; Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) support to health systems in countries affected by climate change, often working through NGOs; and funding to a project at the Charité Hospital, Berlin to build up structures in the Syrian region to promote mental health. France has collaborative schemes in place, particularly with its former colonies in Africa, building institutional frameworks that aim to strengthen capacities in the health system – one example being collaborations between hospitals in France and Mali.

In the case of disasters, early warning systems have been developed – surveillance systems that can help to identify potential infectious disease outbreaks in the immediate aftermath of severe disruptions. Can these be adapted to the situations of people migrating as a result of the slower processes of climate change?

The ‘health of migrants’ in a country should not be spoken about in a general way. Migrants living within a country in Europe are not homogeneous – they comprise individuals from different countries and backgrounds, with different histories and lengths of stay.
in the host country. They have diverse issues that may include obesity in a particular sub-group (e.g. women, men, young people); and may access health services less than the general population (suggesting a need to adjust the health system, including the orientation of doctors and nurses). They may have a double disease burden, reflecting their exposure to infectious diseases in their region of origin and the non-communicable diseases related to lifestyle factors in their new surroundings.

An important factor is also education – on the migration side, ensuring that migrants and refugees enter the education system will enhance their prospects of work and adaptation generally and will improve their health; on the host country side, ensuring that public health and global health curricula, as well as the training of politicians and bureaucrats, are adapted to accommodate the health issues of migrants. Ultimately, helping migrants into work will have the biggest impact on their welfare and health.

Discussions about the medical aspects of migrants coming to Europe tend to focus on physical health (diseases, burden on health systems) and much less on the challenges of dealing with the mental health of migrants. All the knowledge concerning mental health that is taken for granted in Europe may be unknown in other regions of the world from which migrants are originating; where, on the other hand, there may be a totally different understanding of the nature and causes of mental health issues and a large degree of stigmatization that results in very low referral rates. The forms of therapy acceptable may differ greatly, based on the different disease models. While acute physical conditions may be more readily recognisable and treatable on the arrival of new migrants, mental health issues may only more slowly emerge (as will those related to risk factors like obesity and smoking) and may only become accessible to treatment after efforts are made to engage with the attitudes and cultural preconceptions of the migrants and their families and communities, which can take a long time. In the meantime, health practitioners need to become sensitised and learn to seek symptoms of underlying problems (e.g. looking for ‘sleep disturbances’ rather than ‘post-traumatic stress disorder’). In the USA, the CDC has adapted and incorporated mental health issues: can Europe do the same? A further factor is that feelings of rejection and alienation caused by a sense of being unwelcome as a refugee or migrant can also impact on mental health. At the same time, it must also be stressed that within migrant groups there will be many individuals who are highly resilient and will not be a burden on health or mental health services.

In relation to climate, migration and health, it was noted that the health system in the host country needs knowledge of the pre-existing conditions in the countries of origin of the migrants, including the prevalent diseases, cultural norms, gender issues, etc. But in practice, when patients who are migrants present with health problems, it is usually not possible to determine whether they migrated because of a specific factor such as environment or economics, or a combination of factors. It is therefore not possible to track whether their progress and outcomes has been affected by the nature of their displacement. More research is needed if the question of links between causes and outcomes is going to be explored in relation to the health of migrants.

Anti-migration groups often characterise migrants as major disease threats. This needs to be countered, emphasising that there are no specific health threats intrinsic to migrants; but that we do need special health care services or arrangements that may be required for particular arriving migrants, who are themselves put at risk of ill-health by circumstances they have encountered.

Refugees may have a particular problem of access to health services. They may not be legally enfranchised to use services available in transit or receiving countries, or have the knowledge how to access services that are available. It may be necessary to change the thresholds for service access, or make special health care provisions for them on arrival. In an era when preparations are being made for stratified/individualised medicine to
become routinely accessible, it should not be regarded as out of the ordinary to make specific provisions to meet the needs of arriving migrants or refugees.

Diseases also migrate through the movement of vectors as climatic conditions alter. For example, there are now signs that the mosquitos carrying malaria are moving north and that this disease may be re-establishing itself in southern Europe. This poses a significant public health threat and Germany has begun putting both generic and specific plans in place at the Federal level, with attention to providing logistics, experts, responses and advice to the individual States that are responsible for action. There are also groups looking at long-term public health hazards such as flooding and insect vectors to build up expertise and preparedness.

To date there has been little action at the level of the European Union to address climate, migration and health. A number of underpinning actions were suggested, including collecting information on good practices and practical interventions from member states; building up information on the health status of migrants and refugees; and establishing an information/knowledge network. Collaborations should also be extended to include the UN, WHO, IOM and other agencies.
Viewpoints from the field

While Europe was preoccupied with the potential numbers of migrants – including those resulting from the effects of climate change – and their potential health needs and requirements for medical and other services, the meeting also considered the picture in countries that might be sources of such migrants. It was emphasised that much could be done in these countries to mitigate the impacts of climate change, strengthen resilience and avoid the need for environment-related outward migrations. Since many of the countries in question were relatively poor, this approach was inevitably linked with questions of resources, who pays, who determines what gets funded and who benefits the most.

A number of case studies from organizations working in the field provided insights into the challenges, progress being made and potential for future development of strategies and programmes that will help to deal with issues of migration and health at the initial point of climatic impact.

KfW Development Bank

An example of what development partners can offer was provided by KfW Development Bank, which is part of the KfW Group and provides support for the environment and climate protection both through domestic promotion in Germany and through international financing. KfW Development Bank contributes in partner countries on behalf of the German government (BMZ and others), with implementation involving national governments and NGOs in the partner countries. There are active portfolios of work in Africa, Asia and Latin America, as well as in Eastern Europe. In the health sector, recent activities have included projects on reproductive health, health infrastructure, communicable diseases, health financing and sector-wide approaches. They have in common the aim to contribute to building functional and healthy health systems, as a key to resilient populations that can mitigate climate change effects themselves.
One example described was a case study from Ethiopia, where rural communities have multiple problems including great food insecurity due to the El Niño-weather phenomenon (drought/flooding); poor sanitation and drinking water supplies which increase the risk of diseases and epidemics; and malnutrition especially among children and mothers. Rural tribes traditionally migrate in times of drought, but in the recent severe drought livestock have been starving and tribes were faced with severe malnutrition and increased spread of diseases as water availability decreased, at the same time that people fleeing South Sudan and Eritrea have stressed the national resources. A collaborative project of KfW with UNICEF has enhanced food security, providing food supplies for children and pregnant women (for up to 3 months) and supporting a screening outreach programme in cooperation with local NGOs (reaching 36,000 children); strengthened health services through 36 Mobile Health Nutrition Teams which were provided with recurrent costs and supplies for up to 12 months and capacity building for 9000 health workers (serving 2.2 million people); and improved water and sanitation (for 300,000 million people) through rehabilitation of wells, boreholes, supply networks, water trucks, latrines, accompanied by social marketing interventions and hygiene.

The African Risk Capacity (ARC) project is developing insurance solutions for member states of the African Union, where countries suffer severe droughts, floods and tropical cyclones. Climate change will increase the intensity and frequency of these catastrophic events. A vicious circle develops, in which extreme weather events exacerbate food insecurity, trigger (internal) migration, increase poverty and jeopardize development gains. Insurance solutions can contribute to mitigating these risks, enabling more effective and efficient response to weather shocks by providing early assistance to affected households, saving lives and livelihoods – fostering resilience, improved food security and adaptation to climate change, leading to reduced migration. In the ARC scheme, which covers food but not health directly, African States act as insurance policy holders so that, through pay-outs, small farmers and the wider population are protected. Private re-insurance companies help with risk mitigation, covering 80% of the risk and there are four layers of re-insurance in place. Low rainfall triggers release of funding from the insurance pool and activation of pre-prepared plans, which helps to decrease or prevent catastrophe and resulting migration. Members of the AU have now asked the ARC to devise a similar plan for pandemic insurance – which is much more complex and the triggers are harder to define. KfC itself is building up a portfolio of community-based and micro insurance approaches. For health insurance, this includes voucher schemes.

Care

The aid NGO Care began providing assistance from the USA to Europe after World War II, in the form of packages of food, tools and seeds and assisted Berlin during the blockade. Care now works across about 90 countries in Africa, Asia and Latin America, Eastern Europe and the Middle East. It covers, among other areas, humanitarian aid, sexual, reproductive and maternal health, food and women’s empowerment and conducts agricultural and climate change-related projects. Field adaptations and research are undertaken, as well as work on policy issues related to climate change.

According to United Nations Development Programme (UNDP), 80% of all migration is presently within countries. Most migrants are men, leaving their families behind to find work elsewhere. Women farmers contribute to the production of 80% of basic foods but represent only 8% of landowners and access only 10% of available credits in West Africa. They are more vulnerable to food and financial crises and are disadvantaged as a result of poor levels of education and literacy. The Sahel region is one of the most vulnerable in the world, due to its climatic, institutional, livelihood, economic, and environmental context. The recurrence of droughts and repeated shocks, compounded by depleted soil and natural resources, as well as population increase, has increased food and nutrition insecurity. 23.5 million people are food insecure and, across the Sahel, insecurity and conflicts have displaced 4.5 million people. Often
displaced people are welcomed into communities that are also extremely poor and this can lead to degraded resources, stress syndromes and conflicts over water. Countries in the region have high birth and death rates and there are high levels of malnutrition among women and children. Women's empowerment, education and access to and use of birth control are all limited. Conflicts between pastoralists and farmers are frequent, e.g. in upper Niger, as the deserts are moving south and forcing the pastoralists to migrate. One successful response is proving to be the economic empowerment of women, for example through savings and loans groups, which makes communities stronger and more resilient to climate change.

Climate change cannot be isolated as a driving force for migration. Tackling chronic poverty and vulnerability to climate shocks requires a multisectoral approach. Adaptation to climate change is not just about providing technical support – it includes the promotion of gender equality, literacy, access to water and electricity, good governance and much more. It must be emphasised that migration can also be a successful coping strategy and should be supported/facilitated where possible.

International Organization for Migration

The mission of IOM is “dignified, orderly, and safe migration for the benefit of all”. With 162 member states, a staff of over 9000 and a budget of over US$ 1.6 billion, IOM conducts 2,600 projects, among which over 90 are concerned with migration and health.

Regarding terminology related to migration, IOM does not make distinction between ‘internal’ and ‘external’ migrants and recommends the use of the term ‘irregular migrants’ rather than ‘illegal migrants’ for those crossing borders without appropriate authority, since ‘people’ are not ‘illegal’.

Box 4 illustrates the range of concerns about migrant health at different stages along the migration process. Migrants eventually adopt the health profiles of their host countries, but in the short term may be reluctant to use available health services – and access to and availability of health services is a key determinant of the health of migrants.
Box 4  Migrants’ Health Risks

Access to and availability of health care, gender disparity, violence and abuse

Before the migration process
- Socio-economic status
- Education level
- Genetic make-up
- Local disease profile
- Specific health conditions
- Environmental push factors

During Travel
- Modes of travel
- Legal vs illegal border crossing
- Environmental elements

At transit and destination
- Adaptation to new life and cultural differences
- Migration status
- Access to basic survival needs
- Susceptibility to new diseases
- Environmental conditions

Source: T. Zakaria, International Organization for Migration

IOM responses to crises were illustrated by two cases studies, providing perspectives from the Sudan and Yemen.
Internal displacement and humanitarian crisis worsened by environmental factors – Darfur, Sudan

In 2015-2016, the El Niño climate cycle affected millions of vulnerable people in the Horn of Africa, southern and eastern Africa, South Pacific, Central America and South Asia. In some regions, extreme drought and water shortage led to malnutrition, diarrheal and other diseases, whilst in others unusually heavy rains and flooding led to vector-borne diseases and communicable disease outbreaks. 22 million people were affected in the Horn of Africa. The impact was especially severe in Darfur, where there have been violent clashes since 2003, there are 2.6 million internally displaced persons with 1.6 million in camps. The maternal mortality rate is 360/100,000 live births (UNICEF, 2015) and in North Darfur under-5 diarrheal diseases are prevalent, there are low vaccination rates, and high levels of malnutrition. Against this background, IOM mounted a major response in Sudan in 2015, which included providing essential maternal and child health care; identifying and treating cases of malnutrition, vaccination of under-5 year olds according to the Expanded Programme for Immunization schedule, immunization of individuals in response to a measles outbreak, polio vaccinations and Vitamin A supplementation for under-5 year olds, births assisted by skilled birth attendants, pregnant and lactating women provided with one month nutritional feeding support, and training of health workers on diverse priority topics.

Environmental changes as push factor for migration resulting in a migration crisis – Ethiopian migrants in Yemen

Yemen is on the route for migrations from the Horn of Africa to the Gulf states. It has experienced large and increasing numbers of economic migrants in recent years, which may have been exacerbated by El Niño impacts. Health risks faced by migrants following this route include those related to unsafe modes of transportation; extreme exposure to environmental elements; deprivation of food, water, shelter, sanitation and access to health care; violence, torture, drowning and accidents; and extortion and exploitation. IOM has worked to deliver a range of services to migrants in Yemen, including registration, food, health and shelter; and has dealt with a range of medical conditions in children and adults.

Lessons from the field

The impacts of climate change are already being felt on the ground and have already reversed some earlier development successes. These stories provide a strong political and economic argument to convince governments to invest more.

What would be done differently if it was clearly established that climate change is having a big effect? Some priorities would remain the same – e.g. it remains centrally important to develop strong and resilient health systems with the capacity to respond to climate-related and other disasters. From the humanitarian perspective, there is a need to advocate for better preparedness. Donors are often reluctant to respond until a crisis occurs and it is harder to attract resources to build resilience. Use of case examples and evidence can help donors to understand the value of resilience and preparedness.

How can the rights and welfare of migrants be protected? The 1990 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families has been a very challenging convention to implement and even the definition of migrant workers and their families is not clear. There are also many exclusions – for example, of domestic workers in the Middle East. Consequently, other human rights conventions are more useful to defend the rights of migrant workers (many of whom are women and are vulnerable to physical and sexual abuse).
The roles of education, communication and the media

**Spreading knowledge about climate, migration and health**

Knowledge about climate, migration and health is needed, at different levels of depth and detail, by a wide range of actors including politicians and planners, service providers including health professionals, and the public at large. The available evidence suggest that even the very incomplete knowledge available is often not well communicated or acted upon.

Medical doctors often do not know about climate change and its potential health impacts, but in some countries that is beginning to change and the mainstreaming of climate change in education is increasingly seen as important. For example, in some training institutions there are now interdisciplinary classes that medical students can take, to be exposed to environmental issues and there are Massive Open Online Courses (MOOCs) available for those who are interested – but overall there is a need to develop more training on migration, health and the environment.

Doctors may acquire some knowledge of climate-related issues from reading newspapers, which may also be an important channel for bringing the concept to the attention of politicians and the public.

**Treatment of climate, migration and health in *Le Monde***

The media play an extremely important role in informing and shaping public opinion and influencing policies. How is a complex issue like climate change and migration dealt with, especially given the difficulty of defining and measuring the phenomenon? A case study on how the newspaper *Le Monde* addresses the topic during the period 1990-2015 aimed to study the extent to which the newspaper gave access to information on scientific knowledge about climate-induced migrations and actual or potential political mitigation and adaptation measures; and to uncover what were the sources of information about climate change and migration. Searches in the *Le Monde* online database and filtering process yielded 57 relevant articles. The
results provide some preliminary insights into how a newspaper engages with the topic:

- Large publication peaks occurred in 2009 and 2015 (Box 5) and were evidently linked to the COP climate conferences in Copenhagen and Paris – forming an interesting parallel with the publication of academic articles on the subject (Box 3).

- Major aspects that could be identified in the articles were: climate change as an established fact; poor health outcomes; anthropogenic causes, increased numbers of displaced people, and the most vulnerable population is located in the global south.

- Treatment of the information evolved through a number of distinct stages: (1) first articles (1996-2007); (2) The emergence of the issue as a self-sufficient subject (from 2007); (3) A concrete and complex transdisciplinary matter (from 2009); (4) Introduction of nuances. Migration as an adaptation strategy (2011-2015). The underlying trends in this period included the appreciation of reducing doubt about the reality of climate change and growing recognition of the need for action; acceptance of ecological crisis as a growing factor in migration and with the potential to create very large numbers of ‘climate refugees’, but also that such refugees have no formal recognition and that the distinction between refugees and displaced persons is outdated; and a shift to regarding migration as an adaptation strategy – a positive element to reduce the environmental risk and improve the quality of life of people at risk: “Migration is part of the solution to the world’s environmental challenges”.

- Analysis of the authors showed that there was a distribution among different types of journalists (political, science, environmental, health, economic, social and general) and also among writers from other sources (academia, politics).

- The most quoted scientific source was the IPCC, which influenced the terminology used to describe migrants and refugees.

- The intrinsic difficulty of measurement has been acknowledged, for example in remarks such as:

  o “Victims of environmental pressure generated by climate change, climatic refugees remain an unrecognized category of migrants”.

  o “Climate migrants are as difficult to count as to identify, as highlighted by the researchers Jacques Véron and Valérie Golaz in the latest monthly newsletter from institut d’études démographiques (INED)”.

The study will be broadened to include a range of international newspapers for comparison.

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Box 5  Time distribution of 57 articles appearing in Le Monde relating to climate change and migration
Meeting the challenges – Panel Discussion

A panel discussion with representatives from politics and academia explored the questions of what politicians, international organizations and others should be doing in addressing the challenges relating to climate, migration and health.

**What needs to change?**

Responses to the question “what needs to be changed to deal with climate change?” emphasised the importance of working along the whole chain, from causes and local impacts of climate change to the pathways taken by migrants from the point of departure to final destination. There is need for early warning mechanisms of climate-related effects, special services enabling migrants to access health care along the way; strengthening health systems in all areas, especially where the impact is happening; and approaches that are participatory (e.g. working with displaced people, heads of communities) and interdisciplinary.

It was felt that we do not need new structures or bureaucracies (many are already working), but rather to be more structured and to develop a common language to share between people working in their own domains, to ensure they are connected with the bigger picture. There is an iterative process of learning involved, which is adaptive and involves many people, disciplines and sectors. For health, everyone is affected directly or indirectly and we are challenged to go beyond our comfort zone. Better networking and exchange are needed to join together the different approaches. This has implications for multisectoral working (e.g. in areas like health and agriculture),
There is also a strong need for evidence, as shown in this meeting. Access to basic information regarding where people come from and move to is presently inadequate. There are plans by IOM to develop a platform to access information and data sets. The need for approaches that are comparative was highlighted. At present, everyone uses different approaches and data sets, making comparisons and amalgamations of data difficult.

It is important to clarify what we want to get out of studies and their results – including information and policies and national or international solutions. If studies can clarify how much migration is caused by climate change, the information could help policy makers to better evaluate potential responses and their costs. We also need climate policy as a prevention of unnecessary movement and adverse effects. Politically, it is important to recognise that sometimes migration is a rational adaptation response. Knowing when and where the migration flows will occur can help plan and prepare (e.g. for coastal migration).

How can information be quantified and made much more precise, when there is a challenge in attribution due to the complex range of factors operating? Only in the case of natural disasters can climate/weather events be identified as the predominant factor. As was seen in the case of Hurricane Katrina, the rich coped well, while the poor (especially black) were evacuated into the Superdome. It is very difficult to get figures on environmental migration and the data is not robust. Therefore, we use data on disasters, which show that in the last 8 years over 200 million people were displaced due to disasters. A key question is how many of these moved for environmental reasons, when those displaced cite other reasons, such as economic factors. An analogy was drawn with cancer. In the case of lung cancer, the individual patient is not interested in whether the cause was smoking or air pollution. But the doctor may be very interested, as public health will benefit if attribution is established and the Ministry of Health institutes anti-smoking campaigns so that behaviour is changed as a consequence. Public health has techniques that will work at the population level, but not the individual level. Assessment cannot be made simply at an individual level and by asking people why they migrate.

**Ensuring rights**

There is a substantial challenge in ensuring of the rights of internally and externally displaced people in different circumstances. The importance of terminology was emphasised, as the approach taken to each individual may differ according to their status: moving externally or internally leads to different rights and situations. Rural-urban migration is usually ungoverned (but there are exceptions, including in China and Vietnam, where restriction of rural-urban migration have led to a lot of problems that have been poorly addressed) and most people migrate silently and without being identified. In Africa there is a lot of internal displacement, especially towards urban centres and often to the associated informal settlements or shanty towns, for which governments and city authorities may provide little support. Authorities need better information and planning to deal with these situations. For people moving externally, being labelled as a ‘migrant’ suggests that the person has chosen to leave their home country and their treatment depends on the approach of their subsequent host. From the legal point of view, ‘refugees’ are very different: their status is defined in international laws, including with respect to safety and human rights.

The right to health is universal, independent of the country of origin, but the practice is not uniform and there are many places where migrants or refugees are only able to access emergency health care and this poses an increased risk for the public health system. Despite restricted provisions, health is often better in urban slums than in rural areas and this may be a motive for migration – for example, a woman is more likely to get assistance with a birth delivery in Nairobi slums than in remote rural areas of Kenya. Rural-urban migration because of better access to health, rather than because of climate change, has also been seen in West Africa. There is a major inequity issue: access is not just geographical, it is a question of resources and
gender issues are very important in women’s access to health (as well as to many other services). What can we learn from how people experience access to health and the strategies they have adopted?

As there is currently no legal basis internationally for recognizing ‘environmental refugees’, it was questioned why the status of ‘environmental refugee’ should not be created, so that people have protection by law if they cannot live on their own land. It has been argued that national governments and the international community should develop norms and a framework for the protection of the rights of environmental migrants.

Recognizing migration as an adaptation strategy

Rather than being viewed negatively, migration can be seen as a positive strategy for adaptation to the effects of climate change – and, indeed, as a life opportunity rather than a burden. For example, in West Africa, climate change has resulted in the crop growing season getting shorter and men migrate to the cities and mining areas in search of work, while women become heads of their households and become the core managers of food and water resources. Many learn to cope with this heavy burden, e.g. by working together and doing their own gardening out of the crop season and using microfinance, benefitting by becoming more resilient and economically empowered.

The question was raised as to whether planned relocation should be used as an adaptation strategy for people in high risk areas and how this can be facilitated internally and externally. Research done by the IOM in places like Haiti, Vietnam, the Dominican Republic and Papua New Guinea has revealed that there can be very different outcomes depending on local factors. One crucial aspect is that it is very important for people to have access to sustainable livelihood options when they are relocated, or they will return home (examples in Vietnam and Dominican Republic, where relocations did not prove viable). Also, it depends whether there is an imminent threat or a long-term, gradual change.

Questions of compensation are another factor. In terms of relocation as an adaptation strategy, it may be positive for the migrants to have better housing, but negative if there is not a sustainable income. It is a costly exercise, both financially and because people can be very attached to their land, e.g. for cultural reasons like traditional burial grounds – and as such relocation tends to be conducted by big institutions and countries, while individual people move for very personal reasons.

Adopting cross-disciplinary approaches

The complex and multifaceted nature of each of the fields of climate change, migration and health and of their combinations and interactions requires new approaches that are cross-disciplinary and bring together many fields of knowledge and many sectors of action. This presents a strong challenge to institutions of all kinds – whether in academia, government or services – which characteristically develop silos around defined disciplines or activities that are closely linked to firmly prescribed lines of funding and managerial hierarchy that resist change. Consequently, there is an urgent need for different disciplines and actors to talk together, to explore ways of breaking through the silo walls and to draw upon each other’s knowledge, skills and capacities. For example, issues related to gender have been examined and addressed in many different fields in recent years and those working on migration and climate change would benefit greatly from bringing in the existing knowledge, rather than beginning from scratch in trying to deal with the challenge.
As a French-German collaboration, the CVV operates out of centres in Paris and Berlin and has three major areas of focus:

- **Education:** CVV-Paris is a development centre, like a start-up, for MOOCs – ‘MOOCs factory’ that has become one of the leading institutions in Europe for production of Massive Open On-line Courses in the field of Public and Global Health. These are completely free and accessible everywhere in the world, with very high standards.

- **CVV’s second pillar is research.** At CVV Berlin, Elke Schaeffner and Tobias Kurth, work on major population health issues like aging or neurodegenerative diseases. At CVV Paris, Antoine Flahault, Anneliese Depoux and Stefanie Schütte have assembled an interdisciplinary research team to investigate the treatment of climate change and health among scientists, policymakers, and the public (4CHHealth).

- The third pillar is a think tank component, which has been established with the desire to foster Franco-German dialogue and debate in Global Health. The center organizes conferences and actively contributes to the World Health Summit.

The theme of migration and refugee health will be further discussed in Berlin at the 2016 World Health Summit, where Antoine Flahault is the WHS President.

Prof. Stephen A. Matlin, Dr Anneliese Depoux, Dr Stefanie Schütte, Prof. Elke Schaeffner, Prof. Tobias Kurth, Susanne Stöckemann, Sophie Puig-Malet, Corinne Kowalski, Mathieu Hémono, Prof. Antoine Flahault.
Annex

Conference | Program

Agenda

8:45 – 9:30  Registration and Coffee

9:30 – 9:45  Welcome address
S.E. Philippe Étienne, Ambassador of France
Antoine Flahaut, Centre Virchow-Villermé

9:45 – 10:30  Significance of the topic
Climate change impacts in the 21st century
Jacob Schewe, Potsdam Institute for Climate Impact Research (PIK)

Climate change and health: Threats to health security
Alexander Krämer, University of Bielefeld

Climate migration: Gender vulnerability and development policies
Yves Charbit, University Paris Descartes

10:30 – 11:00  Role of academics
Climate Change, Health and Migration - Where are the research gaps?
Stefanie Schütte, Centre Virchow-Villermé

Need for academic visions and proposals
Michel Béra, Conservatoire National des Arts et Métiers (CNAM)

11:00 – 11:30  Coffee Break

11:30 – 11:45  Learning from history?
Jim Webb, Colby College, USA

Historical Perspectives on climate, migration and health

11:45 – 12:45  Implications for Public Health
Malek Bajbouj, Charité - Universitätsmedizin Berlin

Panel discussion
Thomas Ziese, Robert-Koch-Institute

12:45 – 13:45  Lunch Break

13:45 – 14:30  Viewpoints from the field
Annika Calov, KfW Entwicklungsbank

Sabine Wilke, CARE Deutschland

Teresa Zakaria, Intern. Org. for Migration (IOM)

14:30 – 15:00  The role of the media
Climate change and migrations: How Le Monde adresses the topic?
Anneliese Depoux, Centre Virchow-Villermé

How to communicate research?
Timothy Wiehn, Freelance Journalist

15:00 – 15:50  Going global: Consequences for politics and international organizations
Aïne Philibert, University of Montréal

Panel discussion with representatives from politics and academia
Rainer Sauerborn, Heidelberg University

Susanne Meldé, IOM

15:50 – 16:00  Conclusion
Antoine Flahaut, Centre Virchow-Villermé

16:00 – 17:00  Get-Together


14. Mary Robinson, UN Special Envoy for Climate Change. www.reuters.com/article/us-climatechange-migration-idUSKBN0JQ0WD20141212


The mission of the Centre Virchow-Villermé for Public Health Paris-Berlin is to jointly develop and promote innovative education and to foster French-German collaborations within the European context for joint research and teaching activities in Global and Public Health.

The objectives of the Centre are: to organize French-German dialogue and contribute to research activities in different areas in Global and Public Health, to play a leading role in innovative education and promote open access to education and research, to foster the mobility of faculty and students between France and Germany.

The Centre Virchow-Villermé for Public Health Paris-Berlin was initiated by the Franco-German Council of Ministers and co-established on April 15th, 2013, on the occasion of the 50th anniversary of the Elysée Treaty by the University of Sorbonne Paris Cité (USPC) and the Charité – Universitätsmedizin Berlin.

The Centre Virchow-Villermé Paris is directed on the French side by Antoine Flahault, Professor for Public Health at the Paris Descartes University and Director of the Institute for Global Health of the University of Geneva and Anneliese Dépoux. Elke Schäffner, specialist in nephrology and epidemiologist at Charité Berlin and Tobias Kurth, Professor of Public Health and Epidemiology and director of the Institute of Public Health at Charité – Universitätsmedizin Berlin, are the directors on the German side.

The Centre is financed by the Charité – Universitätsmedizin Berlin, the University of Sorbonne Paris Cité (USPC), the French governmental programme “Investissement d’avenir” and Sanofi SA.